

*Legs.* chiefly light reddish brown, the basal two-thirds or less of the hind tibiae or more of the middle tibiae, the apex of the middle femora, front femora and basal half of the front tibiae pale yellow. Tarsi brownish but light in color.

*Wings:* hyaline, appearing grey from dense grey vittae. The veins very narrowly and inconspicuously margined with brown without definite anterior brown borders.

*Holotype:* One female, Dennisport, MASSACHUSETTS, Sept. 3, 1935 (J. Bequaert); this specimen is in the collection of the author, presented to the author through the kindness of Dr. Bequaert. *Paratypes:* One female from Lucaston, NEW JERSEY, Aug. 27, C. W. Johnson collector; this is in the Museum of Comparative Zoology; a specimen in the Boston Society of Natural History from Wallingford, CONNECTICUT, July 1, 1922; the Museum of Comparative Zoology at Harvard contains a specimen from Nantucket, MASSACHUSETTS, Sept. 8. All four specimens are females.

On the suggestion of Mr. Nathan Banks, I take pleasure in naming this species in honor of the well known dipterist, Dr. C. W. Johnson, to whom I owe much for early encouragement in the study of Diptera.

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## Two New Species of Hesperiidæ from North America. (Lepidoptera).

By E. L. BELL, Flushing, New York.

Undescribed species of *Hesperiidæ* still turn up occasionally in the North American fauna despite the fact that the butterflies of this region have been extensively collected and studied for a great many years. This is partially due to the close superficial resemblance of the overlooked species to other closely related species which have already been described and because they occur in areas not usually visited by collectors or by those collectors not interested in collecting *Hesperiidæ*.

Many species of *Hesperiidæ* are quite locally restricted to a certain type of environment and this may occupy a very limited area and be easily passed by. Our southern and southwestern States seem still to offer interesting possibilities for

the collector, as they apparently contain large areas over which little if any collecting has been done.

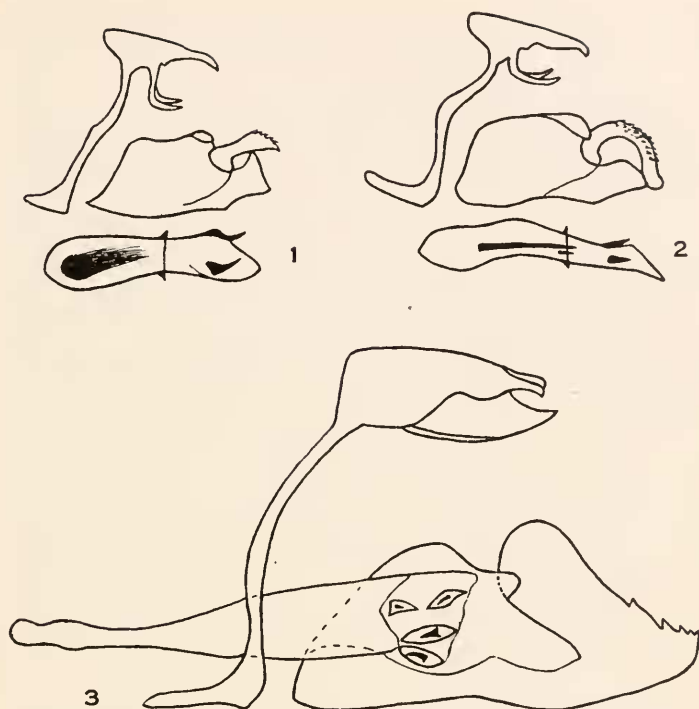
ANTIGONUS PULVERULENTA Felder (Fig. 1).

1869. *Leucochitonea pulverulenta* Felder, Verhandlungen der Kaiserlich Königlich Zoologisches-Botanischen Gesellschaft in Wien, xix, p. 478. Orizaba, Mexico.
1876. *Hesperia zampa* Edwards, Transactions American Entomological Society, v, p. 207. South Apache, Arizona.
1884. *Tagiades taeniatus* Plotz, Jahrbücher des Nassauischen Vereins für Naturkunde, xxxvii, p. 41. Oaxaca, Mexico.
1895. *Systasea pulverulenta* Godman and Salvin, Biologia Centrali-Americana, Rhopalocera, ii, p. 413; pl. 87, figs. 24, 25. Arizona; Mexico; Guatemala.
1923. *Systasea pulverulenta* Draudt, in Seitz Macrolepidoptera of the World, v, p. 904; pl. 176e.
1923. *Systasea pulverulenta* Skinner and Williams, Transactions American Entomological Society, xlviii, p. 299; p. 300, fig. 23 male genitalia.
1930. *Systasea pulverulenta* Holland, Butterfly Book, Revised Edition, p. 344; pl. 46, fig. 1 type of *Hesperia zampa* Edwards.

Brigadier W. H. Evans of the British Museum has called the attention of the writer to the fact that two species have been confused under the name *pulverulenta* and that these two species while quite similar in appearance have a constant difference in the maculation of the primaries and a different form in the male genitalia.

Examination of a considerable number of specimens in the collections of the American Museum of Natural History, the Academy of Natural Sciences of Philadelphia and the National Museum in Washington shows Brigadier Evans to be correct, and that *pulverulenta* appears to be the predominant species in Mexico, extending into the United States in Texas and Arizona. Only one specimen of the other species was found bearing a Mexican label and that Sonora, in the northern part of the Country.

The specimens of *pulverulenta* which were examined came from the following localities: TEXAS: Corpus Christi, San Antonio, Kerrville, Sabinal, Brownsville, Del Rio, New Braun-



Genitalia of: 1. *Antigonus pulverulenta* Felder, 2. *Antigonus evansi* n. sp., 3. *Atrytone berryi* n. sp.

fels: ARIZONA: Tucson MEXICO: Jalapa, Chichen Itza, Rinconada, Oaxaca, Mazatlan, Misantla.

The genitalia of a male specimen from San Antonio, Texas, are figured. The apex of the claspers is very broad, the lower corner produced into a short triangle, the upper into a broad triangular tooth, above which a broad dorsal arm projects obliquely outward, extending a little beyond the apex and carrying some small dorsal teeth in the apical part. The aedoeagus is very large and carries a huge cluster of internal spines near the base and has two horn-like projections near the apex.

*Antigonus evansi* new species (Fig. 2).

It is this insect which so closely resembles *pulverulenta* Felder and has been confused with it. In general most speci-

mens of *evansi* are of a somewhat lighter shade of color and average slightly larger in size than *pulverulenta* but both species are variable in these characters and reliance cannot be placed upon them for accurate identification.

In *evansi* the cell spot of the discal band of the primaries and the spot immediately below it, in interspace 2, are not in a straight line on their inner edges but that edge of the spot in interspace 2 is always further inward toward the base of the wing and the continuity of the band is thus broken at this point. In *pulverulenta* the inner edge of these two spots forms an even line and the band is not broken at the point of junction. This difference seems to be the only outstanding superficial character by which the two species may be separated.

The figure of the male genitalia is from a specimen from Texas. The claspers terminate in a bluntly triangular apex, back of which rises a very long dorsal arm, curving outward and then downward with its rounded tip extending over the apex of the clasper. The aedoeagus is a little longer and less thick than in *pulverulenta* and instead of the very large cluster of internal spines of that species, carries one very long heavy spine (or perhaps a narrow, closely appressed cluster) and one small spine. The two horn-like projections near the apex are also much less developed in *evansi*.

Brigadier W. H. Evans of the British Museum has called the attention of the writer to the fact of the confusion of this species with *pulverulenta* and it is with great pleasure that the new species is named for him.

Expanse: male, 25 mm. to 36 mm., female, 36 mm. to 38 mm.

*Type material*.—*Holotype* male, Baboquivari Mountains, ARIZONA; *allotype* female, El Paso, TEXAS, in collection of the American Museum of Natural History. *Paratypes*: 84 males and 10 females distributed as follows, 24 males, 2 females, American Museum of Natural History; 19 males, 2 females, Academy of Natural Sciences of Philadelphia; 9 males, 6 females, United States National Museum; 32 males in collection of Cyril F. dos Passos. The paratypes are from the following localities: ARIZONA: (roughly north to south) Coyote Mountains; Verde River, Jerome; Congress Jc.; San

Carlos Lake; wheatfields near Globe; Redington; Tucson; Baboquivari Mountains; Cochise County; Huachaca Mountains, south Arizona. Fresno Canyon; Tuscon; Paradise; Santa Rita Mountains; TEXAS: Alpine; Big Bend; Davis Mountains. NEW MEXICO: Alamogordo. CALIFORNIA: Palm Springs; San Diego County; Colo. desert of California. Mexico: Sonora; Baja California.

**Atrytone berryi** new species (Fig. 3).

♂. Upper side. Primaries bright fulvous with a broad blackish brown border, a blackish brown spot beyond the end of the cell, base dark brownish and covered with fulvous hairs, inner margin below vein 1 blackish brown with fulvous hairs in the basal half; a broad, black, oblique stigma of two parts across interspaces 1 and 2; two fulvous subapical spots. Fringes pale fulvous or pale brownish fulvous, sometimes becoming whitish at the tip.

Secondaries with broad blackish brown costal and outer borders, abdominal fold blackish brown covered with fulvous hairs; the discal area fulvous, cut into three elongate spots by the black veins; long fulvous hairs extend from the base over and below the cell. Fringes fulvous becoming whitish at the tip.

Under side. Primaries brownish fulvous in the apical half, the base black from the cell downward, a black stripe indicating the stigma of the upper side, inner margin black below vein 1, outer margin black in interspace 1, a black spot in interspace 2 not reaching the margin. Three discal spots and the apical half of the cell brighter fulvous. The lower of the two subapical spots dimly visible.

Secondaries darker fulvous, immaculate; all the veins distinctly paler yellowish fulvous.

Upper side of the body with fulvous brown hairs. Top of head and palpi fulvous or fulvous brown. Beneath the palpi and pectus are fulvous, sometimes a few black hairs in the palpi; thorax fulvous or fulvous brown; abdomen pale fulvous and with or without a narrow, broken, dark central line. Antennae black above, fulvous beneath, the apical part of the club black, the apiculus red.

♀. Upper side. Primaries blackish brown, a discal band of four bright fulvous spots, two in interspace 1, the lower one the larger, the upper one very small and extending further toward the outer margin than the lower one; an oblong spot in interspace 2 beyond the base of the interspace, convex on

the inner side and concave on the outer side; a somewhat wedge-shaped spot in interspace 3; two small, elongate subapical spots of the same color. Fringes sordid brownish.

Secondaries. Blackish brown with or without a small fulvous discal area cut by the veins into three rather hazy, elongate spots. Fringes sordid brownish or dirty whitish.

Beneath. Primaries blackish brown in the basal half below the cell and along inner border except at the extreme outer margin. The discal band and lower subapical spot repeated, paler, the two spots in interspace 1 fused into one large spot and extended to nearly the outer margin and sordid whitish. Secondaries as in the male but a little darker in tone.

Body above with brownish or fulvous brown hairs. Top of head and palpi with brownish and fulvous hairs. Beneath as in the male.

Expanse: male, 36 mm. to 38 mm.; female, 38 mm. to 42 mm.

*Type material.*—*Holotype* male; Monticello, FLORIDA, March 31 (Engelhardt); *allotype* female; Merritts Island, Brevard County, Florida, September 30, (Berry), in collection of the American Museum of Natural History. *Paratypes*; two males, Orlando, Florida, October 8, one female, same locality, October 17 (Berry), in collection of Mr. Cyril F. dos Passos; one female, Miami, Florida, (Hebard) in collection of the Academy of Natural Sciences of Philadelphia.

It is a pleasure to name this species for Mr. Dean F. Berry of Orlando, Florida, who collected most of the specimens.

On the upper side the appearance of the male is similar to that of *Atrytone conspicua* Edwards but the outer margin of the wings is not quite so rounded and the stigma is slightly thinner than in that species. On the under side the appearance is more similar to that of *Atrytone bimacula* Grote and Robinson, especially in the pale veins of the secondaries but these are pale fulvous in *berryi* and more nearly whitish in *bimacula* and besides *berryi* entirely lacks the white inner margin of these wings, which is so conspicuous in *bimacula*.

The females resemble that sex of *Atrytone arpa* Boisduval and LeConte on the upper side but they are readily distinguished by the entirely different appearance of the under side,

and besides they are of a smaller size than the usual female *arpa*.

The male genitalia differ materially from any of the other closely related species in the genus.

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### The Leng Types of Cicindelidae (Coleoptera).

By RICHARD G. DAHL, Oakland, California.

The following is presented in order to designate lectotypes of the species of Cicindelidae described by C. W. Leng in cotype series and to give in detail data concerning these, as well as the other species described by him. The discussion is intended to clarify their present status, and to add further information concerning them.

Lectotypes herewith designated are now located in the collection of M. A. Cazier, unless otherwise stated. Several other Leng types are located in other collections as are noted herein. Thanks are due M. A. Cazier for the generous use of his collection and for his helpful suggestions and assistance. I wish to express my appreciation also to L. L. Buchanan, E. A. Chapin, P. J. Darlington, C. W. Leng, and A. S. Nicolay for their assistance.

1. *OMUS INTERMEDIUS* Leng. Leng, C. W., 1902, *Cic. of Bor. Amer.*; *Trans. Amer. Ent. Soc.* XXVIII, p. 104.

*Discussion:* In the description of this species, C. W. Leng does not mention a type, and I have been unable to locate any specimens with the data as given in his discussion. However, there is a specimen in the E. D. Harris collection, at the Museum of Comparative Zoology, which now stands under *procerus* Casey and is labeled "0/248"; "cotype *intermedius* Leng"; "Colony Mill Rd. n. Kaweah, California, May 1, R. Hopping" and "from C. W. Leng Nov. 1906, this label is his identification of the specimen" and "Nov. 1910 determined by C. W. L. as v. *procerus* Cas." I do not believe this specimen should be known as the type of *intermedius*. It would be wise to have a lectotype designated, should anyone encounter the